

## CONTENTS OF 99B

Vol. 99B, No. 1.

### Review

U. Anthoni, C. Christophersen,  
L. Hougaard and P. H. Nielsen

- 1 Quaternary ammonium compounds in the biosphere—an example of a versatile adaptive strategy

### Mini-Review

Theodore T. Herskovits and  
Mary G. Hamilton

- 19 Higher order assemblies of molluscan hemocyanins

### General Papers

L. Swevers, J. G. D. Lambert  
and A. De Loof

- 35 Metabolism of vertebrate-type steroids by tissues of three crustacean species

E. Fenouil and Ph. Roch

- 43 Evidence and characterization of lysozyme in six species of freshwater crayfishes from Astacidae and Cambaridae families

Marek S. Zięta and  
Edward F. Skorkowski

- 51 Unusual expression of the threespine stickleback (*Gasterosteus aculeatus*) lactate dehydrogenase isoenzymes and partial characterization of purified LDH-A<sub>4</sub>

Bernard Fournier

- 57 Neuroparsins stimulate inositol phosphate formation in locust rectal cells

M. Garcia-Gil, G. Cipollini, M. Cattani,  
D. Bottai and M. Brunelli

- 65 Protein kinase C activity in the central nervous system of the leech, *Hirudo medicinalis*

Yoshiko Saitoh, Hiroyuki Kawahara,  
Hidenari Miyamatsu and  
Hideyoshi Yokosawa

- 71 Comparative studies on proteasomes (multicatalytic proteinases) isolated from spermatozoa and eggs of sea urchins

P. A. Voogt, P. J. den Besten  
and M. Jansen

- 77 Steroid metabolism in relation to the reproductive cycle in *Asterias rubens* L.

Nelson Carvajal, Eduardo Kessi,  
Claudio Torres, Oscar Marín,  
Viviana Torres, Alejandro Campos  
and Claudia Posada

- 83 Properties and possible role of malate dehydrogenase in the foot muscle of the sea mollusc *Concholepas concholepas* (Gastropoda: Muricidae)

Douglas P. Butts, Karl E. Espelie  
and Henry R. Hermann

- 87 Cuticular hydrocarbons of four species of social wasps in the subfamily Vespinae: *Vespa crabro* L., *Dolichovespula maculata* (L.), *Vespula squamosa* (Drury), and *Vespula maculifrons* (Buysson)

Eibai Lee, Yasuhiro Miki  
and Kimio Kariya

- 93 Subunit selective alteration of hepatic glutathione transferases in spontaneously hypertensive rats

Carmel G. Teahan, Hugh A. McKenzie  
and Mervyn Griffiths

- 99 Some monotreme milk "whey" and blood proteins

A. Manouras, N. K. Karamanos,  
T. Tsegenidis and C. A. Antonopoulos

- 119 Isolation and chemical characterization of two acid carbohydrates from the sea urchin shell, extraction and fractionation of their protein complexes

Jean P. Raffin and Marie T. Thebault

- 125 A specific AMP deaminase assay and its application to tissue homogenates

- Ulrich Knipp and Ernst Zebe 129 *In vivo* investigations on the metabolism of amino acids in the medicinal leech *Hirudo medicinalis*
- Chul Yong Song and Ajay A. Rege 137 Cysteine proteinase activity in various developmental stages of *Clonorchis sinensis*: a comparative analysis
- Tatsuo Muramatsu, Keiichi Hiramoto and Jun-ichi Okumura 141 Changes in ovalbumin and protein synthesis *in vivo* in the magnum of laying hens during the egg formation cycle
- Wayne R. Patterson and John H. Cissik 147 A comparison of human and canine platelet fatty acid composition
- T. G. Baby and S. Hayashi 151 Hepatic ornithine decarboxylase from the frog, *Rana nigromaculata*: dietary induction, purification and some properties
- Arno R. Schwantes, Grant R. Bartlett and Maria Luiza B. Schwantes 157 The hemoglobin of *Geophagus brasiliensis* (Cichlidae)
- Kunihiko Konno 161 Thiols in scallop (*Patinopecten yessoensis*) myosin and regulatory light chain binding
- Ellie O. Osir, Gopalan C. Unnithan and Glenn D. Prestwich 165 Juvenile hormone binding to a 500-K diapause-associated protein of the stem-borer, *Busseola fusca*
- Risako Matsui, Masami Ishida and Shigeru Kimura 171 Characterization of an  $\alpha 3$  chain from the skin Type I collagen of chum salmon (*Oncorhynchus keta*)
- Belinda K. Howell and Anthony D. Matthews 175 Environmental temperature adaptation of fish sarcoplasmic reticulum: a differential scanning calorimetric study
- O. J. Mesna, I.-L. Steffensen, H. Hjertholm, H. E. Heier and R. A. Andersen 181 Effect of the metal in the reaction between metallothionein and antimetallothionein antibody
- René Castillo and Geneviève Negre-Sadargues 187 Effect of eyestalk ablation on the metabolism of carotenoid pigments of the hermit crab *Clibanarius erythropus* Latreille (1818) (Crustacea Decapoda Anomoura)
- Toshihiko Nagase, Toshihiro Sugiyama, Sumio Kawata, Seiichiro Tarui, Harold F. Deutsch and Naoyuki Taniguchi 193 Analyses of polypeptides in the liver of a novel mutant (LEC rats) to hereditary hepatitis and hepatoma by two-dimensional gel electrophoresis: identification of p29/6.8 as carbonic anhydrase III and triosephosphate isomerase
- Helmut Goerke, Rolf Emrich, Kurt Weber and Jean-Claude Duchêne 203 Concentrations and localization of brominated metabolites in the genus *Thelepus* (Polychaeta: Terebellidae)
- Eigoro Tazawa, Akiko Fujiwara and Ikuo Yasumasu 207 Activation of CO-insensitive respiration in echiuroid eggs by light irradiation at various wavelengths
- G. H. Sams, B. M. Hargis and P. S. Hargis 213 Identification of two lipid binding proteins from liver of *Gallus domesticus*
- Yasuki Sato and Toyoo Aikawa 221 Adenosine deaminase in the adductor muscle of the scallop, *Patinopecten yessoensis*
- Ricardo J. Pollero, María del R. González Baró and Carlos E. Irazú 233 Lipid classes' consumption related to fasting and thermal stress in the shrimp *Macrobrachium borellii*
- Paul J. Harms, Guo-Fen Tu, Samantha J. Richardson, Angela R. Aldred, Anthony Jaworowski and Gerhard Schreiber 239 Transthyretin (prealbumin) gene expression in choroid plexus is strongly conserved during evolution of vertebrates



**General Papers**

- Andrea Santulli, Lucia Cusenza,  
Alfonso Modica, Amelia Curatolo  
and Vincenzo D'Amelio 251 Fish plasma lipoproteins—comparative observations in  
Serranides and Sparides
- G. Koss, M. Losekam, E. Schüler  
and I. Schreiber 257 The hepatic glutathione content and glutathione S-transferase  
activity in the pike (*Esox lucius* L.) and rat
- Jay R. Leverone, Carl A. Luer  
and John M. Lawrence 259 The effect of cations on the specific activities of pyruvate kinase  
and glucose-6-phosphate dehydrogenase of *Luidia clathrata*  
(Say) (Echinodermata: Asteroidea)
- S. Huynh, H. Oulhaj, J. Bocquet  
and A. Nouvelot 265 Metabolic utilization of linoleate and  $\alpha$ -linolenate in cultured  
Sertoli cells
- Moises Agosin and Jayanthi Srivatsan 271 Role of microsomal cytochrome P-450 in the formation of  
ecdysterone in larval house fly
- Augusto E. Serrano, Jr and  
Fumio Nagayama 275 Liver 3-hydroxyanthranilic acid oxygenase activity in rainbow  
trout (*Oncorhynchus mykiss*)
- Augusto E. Serrano, Jr and  
Fumio Nagayama 281 Inhibition studies on liver arylformamidases of rainbow trout  
and cattle
- Steven D. Aird and  
Nelson Jorge da Silva, Jr 287 Comparative enzymatic composition of Brazilian coral snake  
(*Micrurus*) venoms
- Zulfiqar A. Malik, Pramjit S. Tappia,  
Laurence A. De Netto, Keith Burdett,  
Raul Sutton and Martin J. Connock 295 Properties of ATPase activity associated with peroxisomes of  
rat and bovine liver
- Shinji Shibanoki, Susan B. Weinberger,  
Duncan Beniston, Gery Schulteis,  
Edward L. Bennett, Mark R. Rosenzweig,  
Koichi Ishikawa and Joe L. Martinez, Jr 301 Hydrolysis of [Leu]enkephalin by chick brain *in vitro*
- Tatsuo Suzuki and Sadao Miyata 307 3-Hydroxyretinol in the rhodopsin-porphyrin retina of an  
invertebrate (*Procambarus clarkii*)
- Yasutake Shimizu and Masatoshi Suzuki 313 The relationship between red cell aging and enzyme activities  
in experimental animals
- Paul Trayhurn, Jacqueline S. Keith,  
Paul A. Racey and Allison M. Burnett 317 Immunological identification of uncoupling protein in inter-  
scapular "brown" adipose tissue of suckling and adult  
pipistrelle bats (*Pipistrellus pipistrellus*)
- M. P. Ennis, G. B. Irvine  
and C. H. Williams 321 Amino-peptidase activities present in tissues of *Helix aspersa*
- Bjarni Ásgeirsson and  
Jón Bragi Bjarnason 327 Structural and kinetic properties of chymotrypsin from  
Atlantic cod (*Gadus morhua*). Comparison with bovine  
chymotrypsin
- Hidekuni Kai, Shinya Doi,  
Takashi Miwa and Masaaki Azuma 337 Discontinuity in temperature dependency of esterase A4 acti-  
vation *in vitro* in relation to the diapause-duration timer
- Seiichi Ando and Mutsuo Hatano 341 Distribution of carotenoids in the eggs from four species of  
salmonids
- Masanao Katagiri, Hiromasa Tojo,  
Kihachiro Horiike and Toshio Yamano 345 Immunochemical relationship of D-amino acid oxidases in  
various tissues and animals
- Nget-Hong Tan and  
Gnanajothy Ponnudurai 351 A comparative study of the biological properties of some sea  
snake venoms

M. J. Mancebo, M. Treviño and J. Espinosa	355	Effect of temperature on the adenylate cyclase activity of <i>Mytilus galloprovincialis</i> mantle tissue
Marianna Turkiewicz, Edward Galas and Halina Kalinowska	359	Collagenolytic serine proteinase from <i>Euphausia superba</i> Dana (Antarctic krill)
Angelines J. Santa Cecilia, Miguel A. Chinchetru and Pedro Calvo	373	Purification and characterization of different "acid" $\beta$ -galactosidases from sheep kidney
Akira Ito, Yoshifumi Itoh, Takashi Sato, Yo Mori, Ko Suzuki and Hideaki Nagase	381	Identification of rabbit uterine cervical procollagenase activator as rabbit matrix metalloproteinase 3 (stromelysin)
S. Raghupathi Rami Reddy, Claude Roustan and Yves Benyamin	387	Purification and properties of two molecular forms of arginine kinase from the adductor muscle of the scallop, <i>Pecten maximus</i>
Nin-Nin Chuang, Che-Chung Yeh and Kung-Shih Lin	395	The basic isoelectric form of $\alpha$ -L-fucosidase from the hepatopancreas of the shrimp <i>Penaeus monodon</i> (Crustacea: Decapoda)
Karel Holada, Jan Evangelista Dyr, Jiří Suttner and Jan Šimák	399	Comparison of rat and human major platelet glycoproteins
Motoko Ikeda, Toshinobu Yaginuma, Michihiro Kobayashi and Okitsugu Yamashita	405	cDNA cloning, sequencing and temporal expression of the protease responsible for vitellin degradation in the silkworm, <i>Bombyx mori</i>
Jennifer J. Clark, Toni L. Ilgen, Marcy F. Haire and Donald L. Mykles	413	Differential effects of oleic acid, sodium dodecyl sulfate, and protease inhibitors on the endopeptidase activities of the lobster multicatalytic proteinase
Haruhiko Toyohara, Kohsei Ito, Masashi Ando, Masato Kinoshita, Yutaka Shimizu and Morihiro Sakaguchi	419	Effect of maturation on activities of various proteases and protease inhibitors in the muscle of Ayu ( <i>Plecoglossus altivelis</i> )
Saleh Darawshe and Ezra Daniel	425	Structure of the polypeptide chain of extracellular hemoglobin from the nematode <i>Ascaris suum</i>
Lori C. St. John, Frank P. Bell, Ferenc J. Kezdy, Anne Vosters, Satish K. Sharma, John H. Kinner and Clark W. Smith	431	Production of an antibody to arterial fatty acid-binding protein (FABP) using a synthetic peptide as the antigen
Hiroshi Yamamoto, Masaaki Azuma and Masaharu Eguchi	437	Further characterization of alkaline phosphatase isozymes in the silkworm midgut: effects of amino acids and metal ions and comparison of sugar chains
Massimo Dal Monte, Isabella Andreini, Roberto Revoltella and Paolo Pelosi	445	Purification and characterization of two odorant-binding proteins from nasal tissue of rabbit and pig
Svend Olav Andersen	453	Cuticular proteins from the shrimp, <i>Pandalus borealis</i>
Masatoshi Mita	459	Methylation during 1-methyladenine production by starfish ovarian follicle cells
Gad Degani and Yael Levcovitch	463	Electrophoretic variation in some cichlid species in Israel
L. Hougaard, U. Anthoni, C. Christophersen, C. Larsen and P. H. Nielsen	469	Characterization and quantitative estimation of quaternary ammonium compounds in marine demosponges
Shigeru Kimura, Yoshirou Miyauchi and Naoyuki Uchida	473	Scale and bone Type I collagens of carp ( <i>Cyprinus carpio</i> )
	477	Announcement



**Mini-Review**Steven W. Johnson and  
Jack A. Alhadeff

- 479 Mammalian
- $\alpha$
- L-fucosidases

**General Papers**

L. H. Teo and E. H. Lim

- 489 Some properties of the trehalase from the digestive gland of the green mussel,
- Perna viridis*
- L.

Fulvia Basaglia

- 495 Interspecific gene differences and phylogeny of the Sparidae family (Perciformes, Teleostei), estimated from electrophoretic data on enzymatic tissue-expression

Ivan Yu. Sakharov

- 509 Purification of alkaline phosphatase from the intestinal content of common seal (
- Phoca vitulina larga*
- ) by immunoaffinity chromatography

Femi Kayode Agboola and  
Adeyinka Afolayan

- 513 Purification and some properties of pyruvate kinase from the skeletal muscle of African land tortoise
- Kinixys erosa*
- (Linn)

A. Aceto, C. Di Ilio, T. Bucciarelli,  
C. Pantani, M. Dell'Agata,  
G. Pannunzio and G. Federici

- 523 Characterization of glutathione transferase from
- Gammarus italicus*

C. P. Silva and J. Xavier-Filho

- 529 Comparison between the levels of aspartic and cysteine proteinases of the larval midguts of
- Callosobruchus maculatus*
- (F.) and
- Zabrotes subfasciatus*
- (Boh.) (Coleoptera: Bruchidae)

R. L. Rose, F. Gould, P. E. Levi  
and E. Hodgson

- 535 Differences in cytochrome P450 activities in tobacco budworm larvae as influenced by resistance to host plant allelochemicals and induction

Izaskun Ibarguren and  
Juan Ignacio Ramos-Martinez

- 541 Modulation of glycolysis in mantle tissue of
- Mytilus gallo-provincialis*
- LMK

Shugo Watabe, Hideki Ushio  
and Kanehisa Hashimoto

- 545 Purification and characterization of a calsequestrin-like calcium-binding protein from carp (
- Cyprinus carpio*
- ) sarcoplasmic reticulum

W. V. Brown, J. P. Spradbery  
and M. J. Lacey

- 553 Changes in the cuticular hydrocarbon composition during development of the social wasp,
- Vespula germanica*
- (F.) (Hymenoptera: Vespidae)

D. H. Corcoran and J. A. Proudman

- 563 Isoforms of turkey prolactin: evidence for differences in glycosylation and in tryptic peptide mapping

Masataka Yoshino, Shigeo Mori,  
Masahiro Nakatsuka and Yukio Shibata

- 571 Acclimatization to hypoxia modulates the tryptophan 2,3-dioxygenase activity in rats exposed to simulated high altitude

Nihal S. Agar, Caroline D. Rae,  
Bogdan E. Chapman and Philip W. Kuchel

- 575
- <sup>1</sup>
- H NMR spectroscopic survey of plasma and erythrocytes from selected marsupials and domestic animals of Australia

John G. Duman, Ding Wen Wu,  
Paul K. Wolber, Gunhild M. Mueller  
and Lisa G. Neven

- 599 Further characterization of the lipoprotein ice nucleator from freeze tolerant larvae of the crane fly
- Tipula trivittata*

Hikaru Henmi, Masahiro Hata  
and Masaaki Takeuchi

- 609 Studies on the carotenoids in the muscle of salmon—V. Combination of astaxanthin and canthaxanthin with bovine serum albumin and egg albumin

C. Garrastazu, M. P. Iniesta,  
M. I. Aranguez and M. Ruiz Amil

- 613 Comparative analysis of propionyl-CoA carboxylase from liver and mammary gland of mid-lactation cow

Theodore Peters, Jr and  
Leslie K. Davidson

- 619 Isolation and properties of a fatty acid-binding protein from the Pacific lamprey (
- Lampetra tridentata*
- )

- H. S. Yong
- H. Bretting, G. Jacobs, S. Müller and O. Breitfeld
- Angela Casado, Rosario de la Torre, Encarnación López-Fernández and Blanca Ruiz del Castillo
- Jan Tengö, Abraham Hefetz, Andreas Bertsch, Ulrich Schmitt, Gunther Lübke and Wittko Francke
- Trevor R. Pettitt and Andrew F. Rowley
- Tomofumi Inokuchi, Ken-ichiro Kobayashi and Shiro Horiuchi
- Brian Green, John L. VandeBerg and Keith Newgrain
- Hélène Petit, Sophie Sance, Geneviève Negre-Sadargues, René Castillo and Jean Paul Trilles
- Mahmoud Aminlari and Hassan Gilanpour
- C. J. Seal and D. S. Parker
- Michael A. Tranulis, Berit Christophersen, Anne K. Blom and Borgar Borrebaek
- Jeroen van der Boon, Oscar P. A. Robertus, Ada Staal, Guido E. E. J. M. van den Thillart and Albert D. F. Addink
- Andreas Möck and Lothar Renwrantz
- J. A. Mitchell and H.-W. Denker
- Zofia Luberdá and Jerzy Strzeżek
- M. Cammarata, N. Parrinello and M. Arculeo
- 625 Biochemical genetic differentiation in the *Trigona atripes* species group of Malaysian stingless bees (Insecta: Hymenoptera: Apidae)
- 629 The galactan-degrading enzymes in the snail *Biomphalaria glabrata*
- 637 Hematologic and biochemical observations in *Gazella dama*, *G. dorcas* and *G. cuvieri*
- 641 Species specificity and complexity of Dufour's gland secretion of bumble bees
- 647 Fatty acid composition and lipoxygenase metabolism in blood cells of the lesser spotted dogfish, *Scyliorhinus canicula*
- 653 Acid proteinases of the fore-gut in metamorphosing tadpoles of *Rana catesbeiana*
- 663 Milk composition in an American marsupial (*Monodelphis domestica*)
- 667 Ontogeny of carotenoid metabolism in the prawn *Penaeus japonicus* Bate (1888) (Crustacea Penaeidea). A qualitative approach
- 673 Comparative studies on the distribution of rhodanese in different tissues of domestic animals
- 679 Isolation and characterization of circulating low molecular weight peptides in steer, sheep and rat portal and peripheral blood
- 687 Glucose dehydrogenase, glucose-6-phosphate dehydrogenase and hexokinase in liver of rainbow trout (*Salmo gairdneri*). Effects of starvation and temperature variations
- 693 SDS-polyacrylamide gel electrophoresis of sarcoplasmic and myofibrillar protein from the white skeletal muscle of the anoxic goldfish, *Carassius auratus* L.
- 699 Isolation and characterization of a lectin from the Cephalochordate *Branchiostoma lanceolatum* (Pallas)
- 709 Endometrial arylamidase activity in the guinea pig: changes during the oestrous cycle, decidualization and ovarian steroid hormone treatment
- 713 Purification and partial characterization of the hatching protease of *Coregonus peled*
- 719 Biochemical taxonomic differentiation between *Mullus barbatus* and *Mullus surmuletus* (Pisces, Mullidae)

Vol. 99B, No. 4.

#### Mini-Reviews

Geoffrey K. Chambers

T. Brittain

- 723 Gene expression, adaptation and evolution in higher organisms. Evidence from studies of *Drosophila* alcohol dehydrogenases
- 731 Cooperativity and allosteric regulation in non-mammalian vertebrate haemoglobins



# **General Papers**

- Hoda I. Negm, Mohamed H. Mansour and Edwin L. Cooper** 741 Identification and structural characterization of Lyt-1 glycoproteins from tunicate hemocytes and mouse thymocytes
- Krystian Kaletha, Marie Thebault and Jean-Paul Raffin** 751 Comparative studies on heart and skeletal muscle AMP-deaminase from rainbow trout (*Salmo gairdneri*)
- Ragnar L. Olsen, Kersti Øverbø and Bjørnar Myrnes** 755 Alkaline phosphatase from the hepatopancreas of shrimp (*Pandalus borealis*): a dimeric enzyme with catalytically active subunits
- Christopher J. Silva, Laurent Wünsche and Carl Djerassi** 763 Biosynthetic studies of marine lipids 35. The demonstration of *de novo* sterol biosynthesis in sponges using radiolabeled isoprenoid precursors
- Meilleko C. Dai, Mary J. Garson and John C. Coll** 775 Biosynthetic processes in soft corals. I. A comparison of terpene biosynthesis in *Alcyonium molle* (Alcyoniidae) and *Heteroxenia* sp. (Xeniidae)
- Stephen C. Trowell, Julia A. Clausen and A. David Blest** 785 The principal light-phosphorylated protein of crab retina is a phosphatase
- C. H. Poh, R. Yuen, H. E. Khoo, M. Chung, M. Gwee and P. Gopalakrishnakone** 793 Purification and partial characterization of stonustoxin (lethal factor) from *Synanceja horrida* venom
- Barbara P. Spike, Robert J. Wright, Stephen D. Danielson and David W. Stanley-Samuelson** 799 The fatty acid compositions of phospholipids and triacylglycerols from two chinch bug species *Blissus leucopterus* and *B. iowensis* (Insecta: Hemiptera; Lygaeidae) are similar to the characteristic dipteran pattern
- Ellie O. Osir, Michael Kotengo, Mohammed F. B. Chaudhury and Leonard H. Otieno** 803 Structural studies on the major milk gland protein of the tsetse fly, *Glossina morsitans morsitans*
- James O. Ochanda, Ellie O. Osir, Edward K. Ngau and Norah K. Olembo** 811 Lipophorin from the tsetse fly, *Glossina morsitans morsitans*
- J. M. Steffen, D. Anne Koebel, X. J. Musacchia and W. K. Milsom** 815 Morphometric and metabolic indices of disuse in muscles of hibernating ground squirrels
- Mary F. Henningfield and Robert W. Swick** 821 Unmasking of GDP binding sites on hamster brown adipose tissue mitochondria and uncoupling protein
- Marcelo Antonelli, Juan Olate, Catherine C. Allende and Jorge E. Allende** 827 Polylysine activates membrane-bound adenylyl cyclase from *Xenopus laevis* oocytes through the G<sub>s</sub> transducing protein
- Samir M. Khoja** 833 A comparison of the allosteric properties of 6-phosphofructo-1-kinase from the flight muscle, leg muscle, mid-gut and hind-gut of the grasshopper, *Poekilocerus bufonius*
- G. B. Proctor, K-M. Chan, J. R. Garrett and R. E. Smith** 839 Proteinase activities in bovine atrium and the possible role of mast cell tryptase in the processing of atrial natriuretic factor (ANF)
- An-Chin Lee and Nin-Nin Chuang** 845 Characterization of different molecular forms of alkaline phosphatase in the hepatopancreas from the shrimp *Penaeus monodon* (Crustacea: Decapoda)
- Yukiko Matsui and Masaharu Eguchi** 851 Purification and relationship of chymotrypsin inhibitors from the fat body and haemolymph of the silkworm, *Bombyx mori*
- M. Garcia-Gil, D. Bottai, M. Cannizzaro and M. Brunelli** 859 Effect of phorbol ester on protein phosphorylation in the central nervous system of the leech *Hirudo medicinalis*: a two-dimensional electrophoretical analysis

- John P. Harrington, Michelle McElroy and Paige Newton** 865 Physicochemical properties of fish hemoglobins isolated from Gulf of Mexico species
- G. Dufhues, L. Philipp, C. Ziegler and G. Beinbrech** 871 The ATPase activity of actomyosin in the presence of C-protein and low paramyosin concentrations
- Amir Sagi, Ellen Homola and Hans Laufer** 879 Methyl farnesoate in the prawn *Macrobrachium rosenbergii*: synthesis by the mandibular organ *in vitro*, and titers in the hemolymph
- Olivier Verneau, François Renaud and François M. Catzeffis** 883 DNA reassociation kinetics and genome complexity of a fish (*Psetta maxima*: Teleostei) and its gut parasite (*Bothriocephalus gregarius*: Cestoda)
- Aldo Di Luccia, Luigi Iannibelli, Erminia Addato, Bruno Masala, Laura Manca and Lino Ferrara** 887 Evidence for the presence of two different  $\beta$ -globin chains in the hemoglobin of the river buffalo (*Bubalus bubalis* L.)
- Norimasa Matsuoka, Kyoko Yoshida, Kiyoko Fukuda and Michio Shigei** 893 Genetic variation in the starfish *Coscinasterias acutispina*
- Yasuo Mugiya and Keiichi Sugano** 899 Short- and long-term effects of ammonium chloride on RNA, DNA and protein concentrations in muscle and serum in the rainbow trout, *Oncorhynchus mykiss*
- Claude Rouleau, Jocelyne Pellerin-Massicotte and Émilien Pelletier** 903 Some properties of malic enzyme and glutamate dehydrogenase activities in the shrimp *Pandalus borealis* from the Saguenay fjord (Québec, Canada)
- Tadahide Kurokawa and Hiroshi Nakano** 911 Changes in isozymes of soluble and mitochondrial malate dehydrogenase of carp (*Cyprinus carpio* L.) during thermal acclimation
- Norihiro Azuma and Kunio Yamauchi** 917 Identification of  $\alpha$ -lactalbumin and  $\beta$ -lactoglobulin in cynomolgus monkey (*Macaca fascicularis*) milk



**Reproduced with the permission of Pergamon Press Inc., by University  
Microfilms Inc. Duplication or resale without permission is prohibited.**

